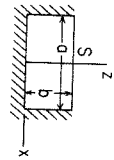


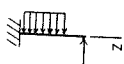
TABLE 26 Formulas for flat plates with straight boundaries and constant thickness (Continued)

Case no., shape, and supports	Case no., loading	Formulas and tabulated specific values
9. Rectangular plate, three edges fixed, one edge (a) simply supported	9a. Uniform over entire plate	$\text{At } x = 0, z = 0) \quad \text{Max } \sigma_y = \frac{-\beta_y q b^2}{f^2} \quad \text{and} \quad R = \gamma_1 q b$ $(\text{At } x = 0, z = 0.6b) \quad \sigma_y = \frac{\beta_y q b^2}{f^2} \quad \text{and} \quad \sigma_a = \frac{\beta_y q b^2}{f^2}$ $(\text{At } x = 0, z = b) \quad R = \gamma_2 q b$ $\left(\text{At } x = \pm \frac{a}{2}, z = 0.6b \right) \quad \sigma_a = \frac{-\beta_y q b^2}{f^2} \quad \text{and} \quad R = \gamma_3 q b$ $a/b \quad 0.25 \quad 0.50 \quad 0.75 \quad 1.0 \quad 1.5 \quad 2.0 \quad 3.0$ β_1 0.020 0.081 0.173 0.307 0.539 0.657 0.718 β_2 0.004 0.018 0.062 0.134 0.284 0.370 0.422 β_3 0.016 0.061 0.118 0.158 0.164 0.135 0.097 β_4 0.031 0.121 0.242 0.343 0.417 0.398 0.318 γ_1 0.115 0.230 0.343 0.453 0.584 0.622 0.625 γ_2 0.123 0.181 0.253 0.319 0.387 0.397 0.386 γ_3 0.125 0.256 0.382 0.471 0.547 0.549 0.530



(Ref. 49 for $\nu = 0.2$)

9aa. Uniform over $\frac{2}{3}$ of plate from fixed edge	$(\text{At } x = 0, z = 0) \quad \text{Max } \sigma_y = \frac{-\beta_y q b^2}{f^2} \quad \text{and} \quad R = \gamma_1 q b$ $(\text{At } x = 0, z = 0.6b) \quad \sigma_y = \frac{\beta_y q b^2}{f^2} \quad \text{and} \quad \sigma_a = \frac{\beta_y q b^2}{f^2}$ $(\text{At } x = 0, z = b) \quad R = \gamma_2 q b$ $\left(\text{At } x = \pm \frac{a}{2}, z = 0.4b \right) \quad \sigma_a = \frac{-\beta_y q b^2}{f^2} \quad \text{and} \quad R = \gamma_3 q b$ $a/b \quad 0.25 \quad 0.50 \quad 0.75 \quad 1.0 \quad 1.5 \quad 2.0 \quad 3.0$ β_1 0.020 0.080 0.164 0.274 0.445 0.525 0.566 β_2 0.003 0.016 0.044 0.093 0.193 0.252 0.286 β_3 0.012 0.043 0.081 0.108 0.112 0.091 0.066 β_4 0.031 0.111 0.197 0.255 0.284 0.263 0.204 γ_1 0.115 0.230 0.334 0.423 0.517 0.542 0.543 γ_2 0.002 0.015 0.048 0.088 0.132 0.139 0.131 γ_3 0.125 0.250 0.345 0.396 0.422 0.417 0.405
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(Ref. 49 for $\nu = 0.2$)

9aa. Uniform over $\frac{1}{3}$ of plate from fixed edge	$(\text{At } x = 0, z = 0) \quad \text{Max } \sigma_y = \frac{-\beta_y q b^2}{f^2} \quad \text{and} \quad R = \gamma_1 q b$ $(\text{At } x = 0, z = 0.2b) \quad \sigma_y = \frac{\beta_y q b^2}{f^2} \quad \text{and} \quad \sigma_a = \frac{\beta_y q b^2}{f^2}$ $(\text{At } x = 0, z = b) \quad R = \gamma_2 q b$ $\left(\text{At } x = \pm \frac{a}{2}, z = 0.2b \right) \quad \sigma_a = \frac{-\beta_y q b^2}{f^2} \quad \text{and} \quad R = \gamma_3 q b$ $a/b \quad 0.25 \quad 0.50 \quad 0.75 \quad 1.0 \quad 1.5 \quad 2.0 \quad 3.0$ β_1 0.020 0.068 0.108 0.148 0.194 0.213 0.222 β_2 0.005 0.026 0.044 0.050 0.047 0.041 0.037 β_3 0.013 0.028 0.031 0.026 0.016 0.011 0.008 β_4 0.026 0.063 0.079 0.079 0.068 0.056 0.037 γ_1 0.114 0.210 0.261 0.290 0.312 0.316 0.316 γ_2 0.000 0.000 0.004 0.011 0.020 0.021 0.020 γ_3 0.111 0.170 0.190 0.185 0.176 0.175 0.190
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(Ref. 49 for $\nu = 0.2$)

9d. Uniformly decreasing from fixed edge to